



October 31, 2014

Ms. Cheryl Laatsch
Statewide FERC Coordinator
Watershed Bureau/Water Division
Wisconsin DNR
Horicon Service Center
N7725 Highway 28
Horicon, WI 53032

Dear Ms. Laatsch:

SUBJECT: Dairyland Reservoir 2014 Water Quality Data

Please find the enclosed water quality data collected during the 2014 calendar year for Dairyland Power Cooperative's (DPC) Flambeau Hydroelectric Project (FERC Project No. 1960-002).

The data set was collected from a fixed-point location in the lower portion of the Dairyland Reservoir and is submitted to the WDNR in order to comply with Article 401(R) of the Flambeau Hydroelectric Project License.

If you have any questions regarding the data, feel free to contact me at (608) 787-1486. I would be happy to discuss any concerns that you may have.

Sincerely,

Benjamin D. Campbell
Environmental Biologist II

BCA:krm

Enclosure(s)

A Touchstone Energy® Cooperative

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Ms. Cheryl Laatsch

Page 2

October 31, 2014

cc/enc: Jeff Scheirer, WDNR

Brad Foss

Tony Mc Kimmy

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
1-May-14	0.10	4.35	7.05	47.1	0.0302	100.9	12.67					140
1-May-14	3.90	4.35	7.04	47.3	0.0303	100.7	12.66	135	0.018	0.00	19.5	
1-May-14	7.90	4.39	7.06	47.1	0.0302	100.6	12.63					
1-May-14	11.90	4.43	7.07	47.0	0.0301	100.4	12.59					
1-May-14	15.70	4.52	7.08	46.7	0.0299	99.9	12.50					
1-May-14	19.70	4.52	7.09	47.1	0.0301	100.3	12.54					
1-May-14	23.70	4.50	7.10	46.9	0.0300	100.2	12.54					
1-May-14	27.60	4.55	7.10	46.7	0.0299	99.8	12.48					
1-May-14	31.30	4.61	7.10	46.6	0.0299	99.5	12.42					
1-May-14	35.00	4.59	7.10	46.5	0.0298	99.4	12.41					
1-May-14	38.70	4.63	7.10	46.5	0.0298	99.1	12.36					
1-May-14	43.40	4.60	7.11	46.8	0.0299	99.1	12.37					
1-May-14	46.80	4.60	7.11	46.6	0.0299	99.4	12.41					
1-May-14	50.50	4.59	7.11	46.8	0.0299	99.3	12.40					
1-May-14	55.10	4.61	7.12	46.6	0.0299	99.2	12.38					
Minimum	0.10	4.35	7.04	46.5	0.0298	99.1	12.36	135	0.018	0.00	19.5	140
Maximum	55.10	4.63	7.12	47.3	0.0303	100.9	12.67	135	0.018	0.00	19.5	140
Mean	27.42	4.52	7.09	46.8	0.0300	99.9	12.49	135	0.018	0.00	19.5	140

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
11-Jun-14	0.00	24.87	7.16	60.7	0.0389	101.2	8.20					100
11-Jun-14	3.80	21.98	7.11	60.0	0.0384	94.8	8.11	167	0.032	19.5	26.1	
11-Jun-14	7.70	21.55	7.01	60.2	0.0385	88.7	7.65					
11-Jun-14	11.90	20.81	6.84	60.2	0.0385	75.6	6.61					
11-Jun-14	15.60	20.38	6.80	62.1	0.0397	71.3	6.30					
11-Jun-14	19.70	20.07	6.86	63.3	0.0405	76.4	6.78					
11-Jun-14	23.70	19.96	6.90	62.9	0.0402	79.3	7.06					
11-Jun-14	27.60	19.88	6.90	63.2	0.0405	79.5	7.09					
11-Jun-14	31.60	19.59	6.92	62.7	0.0401	81.3	7.29					
11-Jun-14	35.30	19.22	6.93	62.6	0.0401	81.8	7.39					
11-Jun-14	39.40	19.02	6.94	62.3	0.0399	82.5	7.49					
11-Jun-14	43.40	18.99	6.94	62.5	0.0400	82.4	7.48					
11-Jun-14	47.60	18.97	6.95	62.2	0.0398	83.2	7.55					
11-Jun-14	51.40	18.96	6.95	62.3	0.0399	83.1	7.55					
11-Jun-14	55.40	18.95	6.95	62.3	0.0399	82.9	7.53					
11-Jun-14	59.40	18.88	6.96	62.0	0.0397	83.2	7.57					
11-Jun-14	63.20	18.87	6.96	62.0	0.0397	83.3	7.58					
Minimum	0.00	18.87	6.80	60.0	0.0384	71.3	6.30	167	0.032	19.5	26.1	100
Maximum	63.20	24.87	7.16	63.3	0.0405	101.2	8.20	167	0.032	19.5	26.1	100
Mean	31.57	20.06	6.95	62.0	0.0397	83.0	7.37	167	0.032	19.5	26.1	100

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
16-Jul-14	0.10	23.45	6.62	79.2	0.0507	79.9	6.67					110
16-Jul-14	3.90	21.85	6.69	78.7	0.0503	75.9	6.53	211 *	0.057	2.56	33.2	
16-Jul-14	7.80	21.84	6.75	79.2	0.0507	75.5	6.50					
16-Jul-14	11.80	21.83	6.79	78.9	0.0505	75.7	6.52					
16-Jul-14	15.80	21.82	6.81	78.6	0.0503	75.5	6.50					
16-Jul-14	19.70	21.80	6.84	78.6	0.0503	75.3	6.49					
16-Jul-14	23.80	21.80	6.87	78.6	0.0503	75.3	6.49					
16-Jul-14	27.80	21.80	6.89	78.9	0.0505	75.6	6.52					
16-Jul-14	31.60	21.79	6.91	78.6	0.0503	75.5	6.51					
16-Jul-14	35.60	21.79	6.93	78.8	0.0504	75.4	6.50					
16-Jul-14	39.70	21.79	6.94	78.6	0.0503	75.4	6.50					
16-Jul-14	43.60	21.78	6.96	79.0	0.0506	75.4	6.50					
16-Jul-14	47.50	21.77	6.96	78.9	0.0505	75.2	6.48					
16-Jul-14	51.50	21.78	6.97	78.6	0.0503	75.2	6.48					
16-Jul-14	55.40	21.77	6.98	78.8	0.0504	75.2	6.48					
16-Jul-14	59.40	21.74	6.98	78.2	0.0501	75.3	6.49					
16-Jul-14	63.30	21.70	6.99	78.5	0.0502	75.3	6.42					
Minimum	0.10	21.70	6.62	78.2	0.0501	75.2	6.42	211	0.057	2.56	33.2	110
Maximum	63.30	23.45	6.99	79.2	0.0507	79.9	6.67	211	0.057	2.56	33.2	110
Mean	31.66	21.89	6.88	78.7	0.0504	75.7	6.50	211	0.057	2.56	33.2	110

* True color sample was analyzed past the hold time.

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
14-Aug-14	0.00	23.56	7.52	96.7	0.0619	94.4	7.85					158
14-Aug-14	3.90	23.55	7.49	97.1	0.0621	93.1	7.75	108	0.017	75.3	44.4	
14-Aug-14	7.70	23.53	7.44	97.2	0.0622	92.0	7.66					
14-Aug-14	11.70	23.51	7.43	96.7	0.0619	92.4	7.70					
14-Aug-14	15.60	23.50	7.45	96.9	0.0620	93.0	7.74					
14-Aug-14	19.50	23.48	7.46	96.7	0.0619	93.7	7.80					
14-Aug-14	23.70	23.45	7.42	96.8	0.0619	91.7	7.65					
14-Aug-14	27.60	23.42	7.34	96.9	0.0620	88.1	7.35					
14-Aug-14	31.60	23.32	7.26	96.9	0.0620	83.0	6.94					
14-Aug-14	35.60	23.25	7.17	96.3	0.0616	79.0	6.61					
14-Aug-14	39.50	22.97	7.03	95.9	0.0613	70.3	5.91					
14-Aug-14	43.50	22.83	6.93	95.7	0.0612	62.7	5.28					
14-Aug-14	47.50	22.71	6.83	94.8	0.0607	54.7	4.62					
14-Aug-14	51.30	22.64	6.79	94.9	0.0607	52.2	4.42					
14-Aug-14	55.30	22.46	6.74	95.3	0.0610	45.2	3.84					
14-Aug-14	59.30	22.19	6.69	98.5	0.0630	34.5	2.95					
14-Aug-14	63.20	21.99	6.69	101.9	0.0652	25.0	2.14					
Minimum	0.00	21.99	6.69	94.8	0.0607	25.0	2.14	108	0.017	75.3	44.4	158
Maximum	63.20	23.56	7.52	101.9	0.0652	94.4	7.85	108	0.017	75.3	44.4	158
Mean	31.56	23.08	7.16	96.8	0.0619	73.2	6.13	108	0.017	75.3	44.4	158

Date (dd-mm-yy)	Depth (ft.)	Temp. (°C)	pH (units)	Specific Conductance (µSiemens/cm)	TDS (g/L)	DO (% saturation)	DO (mg/L)	True Color (pcu)	Total Phosphorous (mg/L)	Chlorophyll a (µg/L)	Alkalinity (mg/L as CaCO3)	Secchi Disc Depth (cm)
1-Oct-14	0.10	15.96	6.92	74.3	0.0475	82.3	8.03				33.2	80
1-Oct-14	3.60	15.96	6.95	74.3	0.0475	82.3	8.03	221				
1-Oct-14	7.60	15.96	6.95	74.6	0.0478	82.4	8.04					
1-Oct-14	11.50	15.95	6.95	74.5	0.0477	82.3	8.04					
1-Oct-14	15.50	15.95	6.95	74.5	0.0477	82.4	8.04					
1-Oct-14	19.50	15.95	6.95	74.3	0.0475	82.5	8.06					
1-Oct-14	23.50	15.94	6.96	74.3	0.0475	82.5	8.05					
1-Oct-14	27.50	15.94	6.97	74.4	0.0476	82.2	8.02					
1-Oct-14	31.40	15.94	6.97	74.3	0.0475	81.8	7.98					
1-Oct-14	35.50	15.92	6.96	74.5	0.0477	81.7	7.98					
1-Oct-14	39.40	15.64	6.93	73.4	0.0470	76.3	7.50					
1-Oct-14	43.40	15.37	6.86	71.6	0.0459	75.9	7.50					
1-Oct-14	47.30	15.22	6.83	72.5	0.0464	74.2	7.36					
1-Oct-14	51.30	15.10	6.81	72.0	0.0461	73.0	7.25					
1-Oct-14	55.40	14.90	6.79	70.9	0.0454	71.2	7.11					
1-Oct-14	59.30	14.86	6.78	70.7	0.0452	69.4	6.93					
1-Oct-14	63.30	14.40	6.72	71.3	0.0456	59.6	6.01					
Minimum	0.10	14.40	6.72	70.7	0.0452	59.6	6.01	221			33.2	80
Maximum	63.30	15.96	6.97	74.6	0.0478	82.5	8.06	221			33.2	80
Mean	31.48	15.59	6.90	73.3	0.0469	77.8	7.64	221			33.2	80